

REMARKS

Claims 1 through 24 are in the case. Claims 1, 2, 3, 5, 7, 11, 12, 18, 19 and 23 are amended by this amendment. Claim 24 is added by this amendment.

Claims 1, 11 and 23 are objected to because it is unclear which household cleaning appliances are considered "major." The element "major" has been deleted from claims 1, 3, 11 and 23. Claim 5 is objected to because "fit-ting" should be "fitting." Claim 5 has been amended as suggested.

Claims 1, 3 through 10 and 23 are rejected under 35 U.S.C. § 102(b) as being anticipated by Japanese patent publication 9-303624. Claims 1 and 23 have been amended to require that the interior of the quick connect fitting retainingly and releasingly engage the exterior of the male fitting. Enclosed is an English translation of JP 9-303624 from the Japanese Patent Office website. A review of the English translation shows that the disclosure of this publication is directed to the formation of a short 90° bend in a drain hose so that the bend can be made in as small a space as possible without collapse of the tubing. This publication does not disclose any fitting that retainingly and releasingly engages the washer tub drain. Claim 1, as amended, and claims 2 through 4 and 24 that depend from claim 1, and claim 23 are not anticipated by JP '624. Claim 5 has been amended to require that the quick connect fitting include a tubular sleeve and a tubular quick connect retainer fitting within and being integrated into the tubular sleeve. JP '624 does not disclose or suggest the use of tubular sleeve and tubular quick connect retainer fitting as claimed in amended claim 5.

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 9-303624. Claim 2 depends from claim 1. As stated above, claim 1 is not anticipated by this JP reference. Therefore, claim 2 is patentable over the JP reference for the same reasons stated above.

Claim 11 is rejected under 35 U.S.C. § 102(b) as being anticipated by EP publication 0 595 742. Claim 11 has been amended to require that the quick connect retainer sleeve is tubular and extends from one end of the corrugated tubing, the quick connect fitting is also tubular, fits within and is integral with the quick connect sleeve, and the outwardly extending flange of the quick connect fitting engages the free end of the tubular quick connect fitting (see FIG. 1,

which shows the flange 20 contacting the outside end of the sleeve). Claim 11, as amended, is not anticipated by EP 0 595 742.

Claims 12 and 13 are rejected under 35 U.S.C. § 102(b) as being anticipated by Bonnema et al. Claim 12 has been amended to require that the quick connect retainer sleeve is tubular, the quick connect retainer is also tubular and fits within and is attached to the interior of the tubular sleeve. The latch member 23 of Bonnema is not tubular. Claim 12, as amended, and claim 13, which depends from claim 12, are not anticipated by Bonnema.

Claims 18 and 19 are rejected under 35 U.S.C. § 102(b) as being anticipated by Wood et al. Claim 18 has been amended to require the quick connect retainer sleeve is tubular, the quick connect retainer is tubular and fits within and is integral with the tubular sleeve. The elements in Wood, 29A, 30A, cited by the Examiner do not fit within the tubular sleeve. Elements 29A and 30A are formed monolithically with tube element 56 and can not be a separate element that fits within the tubular sleeve as required by amended claim 18. Further, claim 19 has been amended to require that the flexible fingers be radially spaced apart. Elements 29A, 30A of Wood are axially spaced apart. Claims 18 and 19, as amended, are not anticipated by Wood.

Claims 20 through 22 are rejected under 35 U.S.C. § 102(b) as being anticipated by Rea et al., '279. Claim 20 requires that the quick connect sleeve is monolithic with the tubing. Rea discloses a quick connect fitting where the tubing is a separate piece that fits onto the quick connect fitting. Monolithic as used by Applicant in the specification and claims and shown in the drawings means a unitary structure where the structure is cast as a single piece without joints or seams. The term monolithic is more limiting than integral. Integral can include separate pieces that attached to one another. Monolithic can not include separate pieces that have been integrally joined. Claims 20 through 22 are not anticipated by Rea because the tubing and quick connect fitting in Rea are not monolithic with one another.

Claims 12 through 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rea et al., '279 in view of Kutnyak et al. The Examiner cited Rea for teaching a quick connect sleeve monolithic with one end of the tubing. As discussed above with respect to claims 20 through 22, the tubing of Rea (not shown in the figures) is integral with but is not monolithic with the quick connect fitting. Because Rea does not disclose or teach the limitation of the tub-

ing and quick connect fitting being monolithic with one another as cited by the Examiner, claims 12 through 17 are not obvious in view of Rea and Kutnyak.

In view of the above, it is respectfully submitted that claims 1 through 24 are in condition for allowance. Reconsideration of the rejections is requested and allowance of the claims is solicited.

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Michael H. Minns

Reg. No. 31,985

Hahn Loeser + Parks LLP
1225 West Market Street
Akron, Ohio 44313
(330) 864-5550

HOSE FOR WASHING MACHINE



Patent Number: JP9303624
Publication date: 1997-11-28
Inventor(s): OKADA AKIHIKO
Applicant(s): TOUTAKU KOGYO KK
Requested Patent: ☐ JP9303624

Application Number: JP19960144961 19960514

Priority Number(s):

IPC Classification: F16L11/11; D06F39/08

EC Classification:

Equivalents: SG83665

Abstract

PROBLEM TO BE SOLVED: To provide a washing machine in which a pipe can be sharply bent with the piping maintaining the cylindrical pipe shape even in the vertically narrow space of the lower part of the washing tank, the bottom of the washing machine can be disposed in a low position and the vertical height of the whole washing machine is low relative to the vertical length of the washing tank.

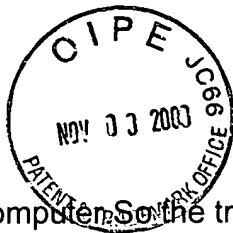
SOLUTION: In a hose for a washing machine provided on one end side with a water receiving tubular part 1 connected to a draining tube and on a part continued to the tubular part 1 with a bend formed part 2 bendably formed into the L-shaped form, the bend formed part 2 has a bellows-like irregular corrugation consisting of the combination of different diameter annular parts, and both sides of the bend formed part 2 in the axial direction of the pipe are held by annular parts 12, 12 projecting in the right angle direction from both sides of a base part 11 of the bend forming means 10. Large diameter annular parts 21, 21... in the bend formed part 2 about forcibly against each other at the small diameter side of a hose bending part to bend the hose at a right angle.

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Bibliography.

- (19) [Country of Issue] Japan Patent Office (JP)
(12) [Official Gazette Type] Open patent official report (A)
(11) [Publication No.] JP,9-303624,A.
(43) [Date of Publication] November 28, Heisei 9 (1997).
(54) [Title of the Invention] The hose for washing machines.
(51) [International Patent Classification (6th Edition)]

F16L 11/11
D06F 39/08 311

[FI]

F16L 11/11
D06F 39/08 311 C

[Request for Examination] Un-asking.

[The number of claims] 3.

[Mode of Application] FD.

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(22) [Filing Date] May 14, Heisei 8 (1996).

(71) [Applicant]

[Identification Number] 000221502.

[Name] **** industrial incorporated company.

[Address] 1-2-1, Sakaemachi, Takatsuki-shi, Osaka.

(72) [Inventor(s)]

[Name] Okada Akihiko.

[Address] 1-2-1, Sakaemachi, Takatsuki-shi, Osaka Inside of **** industrial incorporated company.

(74) [Attorney]

[Patent Attorney]

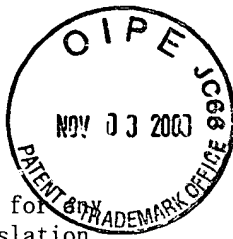
[Name] **** Yataro.

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Summary.

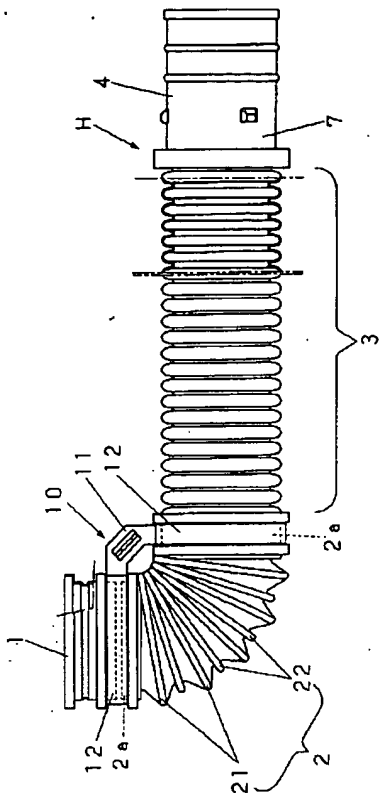
(57) [Abstract]

[Technical problem] Even if rapid bending formation is possible and the vertical space of the wash tub lower part is small, it can pipe, where the shape of a cylinder is maintained, and the bottom of a wash tub can be arranged in a low position, and it enabled it to obtain a washing machine with the low vertical height of the whole washing machine considering the vertical length of a wash tub.

[Means for Solution] An end side is equipped with the carrier canteen-like section 1 for connecting with the drainage cylinder a in a washing machine A. It is a hose for washing machines equipped with the bending formation section 2 for bending into the portion following this in the shape of L character, and forming in it. It considers as the concavo-convex wave of the shape of bellows which the aforementioned bending formation section 2 becomes from the combination of the annular section of a different diameter. And the both sides 23 and 24 of the direction of a tube axis of this bending formation section 2 are held by the two annular sections 12 and 12 which project in the right-angled direction mostly from the both sides of the base 11 of the bending formation implement 10. The major-diameter annular sections [in / this bending formation section 2 / on the minor diameter side of a hose flexion, and] 21 and 21 -- Thing which comrades bend at a right angle and by which they are mutually formed mostly as a state which carries out pressure-welding ****.

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CLAIMS

[Claim(s)]

[Claim 1] An end side is equipped with the carrier canteen-like section (1) for connecting with the drainage cylinder (a) in a washing machine (A). It is a hose for washing machines equipped with the bending formation section (2) for bending into the portion following this in the shape of L character, and forming in it. It considers as the concavo-convex wave of the shape of bellows which the aforementioned bending formation section (2) becomes from the combination of the annular section of a different diameter. The both sides (23) of the direction of a tube axis of this bending formation section (2) and (24) [and] The two annular sections which project in the right-angled direction mostly from the both sides of the base (11) of a bending formation implement (10) (12), The major-diameter annular section (21) in [in / the minor diameter

side of a hose flexion / it is held by (12) and] this bending formation section (2), (21) -- Hose for washing machines with which comrades bend at a right angle and are mutually formed mostly as a state which carries out pressure-welding ****.

[Claim 2] An end side is equipped with the carrier canteen-like section (1) for connecting with the drainage cylinder (a) in a washing machine (A). It is a hose for washing machines equipped with the bending formation section (2) for bending into the portion following this in the shape of L character, and forming in it. The aforementioned bending formation section (2) with the annular section (21) of a major diameter, and (21) -- The annular section of a minor diameter (22), It considers as the concavo-convex wave of the shape of bellows with -- which consists of combination. (22) -- The two annular sections to which the both sides (23) of the direction of a tube axis of this bending formation section (2) and (24) project in the right-angled direction mostly from the both sides of the base (11) of a bending formation implement (10) (12), The aforementioned major-diameter annular section (21) in [in / the minor diameter side of a hose flexion / it is held by (12) and] this bending formation section (2), (21) -- Hose for washing machines with which comrades bend at a right angle and are mutually formed mostly as a state which carries out pressure-welding ****.

[Claim 3] An end side is equipped with the carrier canteen-like section (1) for connecting with the drainage cylinder (a) in a washing machine (A). It is a hose for washing machines equipped with the bending formation section (2) for bending into the portion following this in the shape of L character, and forming in it. The annular section by which a part of pipe hoop direction is made the minor diameter for the aforementioned bending formation section (2) with the annular section (21) of a major diameter, and (21) -- (22), It considers as the concavo-convex wave of the shape of bellows with -- which consists of combination. (22) -- The two annular sections to which the both sides (23) of the direction of a tube axis of this bending formation section (2) and (24) project in the right-angled direction mostly from the both sides of the base (11) of a bending formation implement (10) (12), The aforementioned major-diameter annular section (21) in [in / the minor diameter side of a hose flexion / it is held by (12) and] this bending formation section (2), (21) -- Hose for washing machines with which comrades bend at a right angle and are mutually formed mostly as a state which carries out pressure-welding ****.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] this invention relates to the hose for drainage attached and used for an electric washing machine.

[0002]

[Description of the Prior Art] that for which two kinds of hose with the hose for outside the plane which this kind of hose for washing machines is conventionally connected to the hose for the insides of a plane attached in the interior of a washing machine and this hose for the insides of a plane as a general thing, and is put along with the tank of a washing machine are used, and these inside and outside -- it replaces with a separate hose and there are some which used the hose inside the plane and the outside-the-plane hose as one long hose which stood in a row in a series

[0003] The hose for washing machines which ** and is generally known conventionally [these] If an end side is equipped with the carrier canteen-like section for connecting with the drainage cylinder in a washing machine and it is in the hose for the insides of a plane even if it is in which thing If it has a tubed part for connecting with opening formed in the other end side at the side attachment wall of a washing machine and is in an inside-and-outside one apparatus hose, it has the middle tubed part of the long picture which projects outside through this opening.

[0004] On the other hand, there is a thing of 1 tub type which made the combination tub the thing, and the wash tub and dehydration tack of 2 tub type which made the wash tub and the dehydration tack another tub in a washing machine. And the drainage cylinder in a washing machine is prepared perpendicularly, it goes caudad, and opening of anything [these] of a type is carried out, and the object for the connection by the side of the hose other end formed in the side attachment wall of a washing machine or opening for passage is carrying out opening horizontally. Also in the aforementioned hose for the insides of a plane, the hose for washing machines therefore, also in an inside-and-outside one apparatus hose Since the carrier canteen-like section must be perpendicularly attached to the drainage cylinder in a washing machine and the tubed part for external hose connection or the pars intermedia of a hose must be horizontally attached or passed to opening of a washing machine 90-degree angle change of the hose must be made between the drainage cylinder of a washing machine, and opening.

[0005]

[Problem(s) to be Solved by the Invention] By the way, although there are two kinds, or [whether the diameter of a tub is enlarged or / enlarging vertical length], in order to make the wash tub of a washing machine into a mass large-sized tub If a diameter is enlarged, must also enlarge an outside case, and become what also has a large-sized exterior, and not only material cost but a packing material, freight, etc. increase, and are desirable in no points. Moreover, if the vertical length of a tub is enlarged and the whole washing machine is made into what has high length, it will not stop at producing the same trouble as the above, but will be hard to use it for the low people of the back.

[0006] Then, it is possible to make lower space inside a washing machine small as much as possible, enlarging the vertical length of a wash tub as a means to solve these technical problems. Moreover, this method is an effective method, even if it is, when using the wash tub of the present size, and it has the advantage which can obtain the washing machine which height tends to wash low.

[0007] However, it was the thing which a bend radius is large, rapid bending formation in the lower part of a wash tub is difficult, and needs considerable large space for the lower part inside a washing machine with the conventional drainage hose, it can be compressed [thing] in the interior of a washing machine, and can deform [thing] if this space is made small, and cannot make a cylinder state hold.

[0008] Then, this invention aims at solving the technical problem which such a conventional hose for washing machines had. It can pipe, where the shape of a cylinder is maintained, even if rapid bending formation was possible and the vertical space of the wash tub lower part was small. Vertical space of the wash tub lower part concerned tends to be made small as much as possible, the pars basilaris ossis occipitalis of a wash tub can be arranged in a low position, and it is going to offer the hose for washing machines which enabled it to obtain the low washing machine of the vertical height of the whole washing machine considering the vertical length of a wash tub here.

[0009]

[Means for Solving the Problem] If it explains using the sign which used the composition of this invention for attaining this purpose for the example, the hose H for washing machines said to this invention An end side is equipped with the carrier canteen-like section 1 for connecting with the drainage cylinder a in a washing machine A. It is a hose for washing machines equipped with the bending formation section 2 for bending into the portion following this in the shape of L character, and forming in it. It considers as the concavo-convex wave of the shape of bellows which the aforementioned bending formation section 2 becomes from the combination of the annular section of a different diameter. And the both sides 23 and 24 of the direction of a tube axis of this bending formation section 2 are held by the two annular sections 12 and 12 which project in the right-angled direction mostly from the both sides of the base 11 of the bending formation implement 10. The major-diameter annular sections [in / this bending formation section 2 / on the minor diameter side of a hose flexion, and] 21 and 21 -- It considers as the composition in which comrades bend at a right angle and are mutually formed mostly as a state which carries out pressure-welding ****.

[0010] It **. one concrete form of the aforementioned bending formation section 2 Considering as the concavo-convex wave of the shape of the annular section 22 of a minor diameter, and bellows with 22 -- which consists of combination with the annular section 21 of a major diameter, and 21 --, and other one form It is considering as the thing of composition of having considered as the concavo-convex wave of the shape of the annular section 21 of a major diameter, the annular section 22 which made the minor diameter a part of pipe hoop direction with 21 --, and bellows with 22 -- which consists of combination.

[0011]

[Embodiments of the Invention] In operation of this hose, the overall length of a hose is mostly fabricated in the shape of a straight line, the aforementioned bending formation section 2 is bent after an appropriate time, and it bends in the shape of L character using the formation implement 10, and forms. The aforementioned major-diameter annular sections 21 and 21 which constitute the bending formation section 2 of a hose at this time -- It considers as the minimum bending posture by changing into the state of bending comrades and carrying out pressure-welding **** mutually at the minor diameter side in a posture. Although especially the formation material of a hose is not limited, its material which was rich in water resistance like a polyolefine system resin or a PVC resin is desirable.

[0012] Moreover, the flat tubed parts 2a and 2a for making the annular sections 12 and 12 in the

aforementioned bending formation implement 10 fit into the both sides of the aforementioned bending formation section 2 shall be formed in the hose, or it can carry out on it as what has formed the flat cylinder part for the fixation inside the plane for fixing to the interior of a washing machine in the necessary part of the pars intermedia of a hose. Moreover, if it is in the middle tubed part 3, a predetermined length portion can be used as a flat tubed part without irregularity, or the configuration of a concavo-convex wave can also be carried out as the concavo-convex wave of a cross-section semicircle arc, and a concavo-convex inequality side triangle-like wave.

[0013]

[Example] The example of this invention is explained based on a drawing below. Drawing 1 or drawing 4 is what showed the hose H of the 1st example of this invention among drawing, drawing 1 is drawing showing the structure of Hose H which fractured and showed the part, and they are drawing in which drawing 2 fractured the part similarly and it was shown and as for which was bent and the hose H before formation carried out the structure table, and drawing in which drawing 3's having bent, and having expanded and shown the formation portion. Drawing 4 is drawing showing the state where the washing machine A was equipped.

[0014] the resin material which the hose H for washing machines said to this invention is the easy synthetic-resin material of fabrication like polypropylene (PP), and was rich in suitable rigidity and suitable *****, and flexibility -- the fabrication from resin extrusion equipment -- metal mold -- it extrudes in the shape of a tube inside, and the blow molding of this is changed into a straight-line state The hose H of this 1st example is a hose for the insides of a plane piped by attaching in the interior of a washing machine A, as shown in drawing 4 .

[0015] The structure at the time of molding of this hose H forms the carrier canteen-like section 1 for connecting with the drainage cylinder a in a washing machine A in an end side, as drawing 2 was shown. The bending formation section 2 for bending into the portion following this in the shape of L character behind, and forming in it is formed. The flat tubed parts 2a and 2a are formed in the both sides 23 and 24 of the direction of a tube axis of this bending formation section 2. On the other hand, it considers as the middle tubed part 3 which formed in the concavo-convex bellows-like wave the interstitial segment between this tubed part 2a by the side of 24 and tubed part 4 for external hose connection currently formed in the other end side, and these whole is mostly formed in series one in the shape of a straight line. Moreover, the aforementioned bending formation section 2 is made into the bellows-like irregularity wave of the special configuration which carried out arrangement formation of the annular section 21 of a major diameter, and the annular section 22 of a minor diameter by turns.

[0016] As it ** and was shown in drawing 1 and drawing 3 using the hose made into such structure To the tubed parts 2a and 2a of the both sides 23 and 24 of the direction of a tube axis of the aforementioned bending formation section 2 Fitting maintenance of the two annular sections 12 and 12 formed in the shape of [which was formed separately / which is bent and is made to have projected in the right-angled direction mostly from the both sides of the base 11 of the formation implement 10] double fold is carried out. This bending formation section 2 is made crooked in the shape of L character, it sets to the minor diameter side of this flecion, and they are the aforementioned major-diameter annular sections 21 and 21. -- Comrades consider as the state of carrying out pressure-welding ****, mutually. It considers as the structure made to

have bent and formed in a right angle mostly as a state wrapped in by the side attachment wall of the minor diameter annular section 22 and the major-diameter annular sections 21 and 21 of the both sides which a periphery portion adjoins of 22 -- (especially refer to drawing 3).

[0017] By doing in this way, the aforementioned bending formation section 2 was made crooked by the very small bend radius, and this incurvation posture was made into the minimum thing. Moreover, as the hose H in this example was expanded and shown in drawing 3 It is made to use also [a / tubed part 2/ for fitting of the annular section 12], and the length of the carrier canteen-like section 1 is made / in / the aforementioned bending formation implement 10 / for the portion 23 which adjoined the bending formation section 2 side in the carrier canteen-like section 1 formed in order to connect with the drainage cylinder a of the washing machine A formed in the end side] into the thing of little length. In addition, the sign 7 shown in drawing 1 and drawing 2 is a fitting portion made [the opening c which has carried out opening to the side attachment wall b in a washing machine A] to carry out insertion fitting.

[0018] Thus, incurvation use of the hose H said to this invention can be carried out as the minimum vertical width of face. Therefore, sharply, the soffit of the wash tub d of the interior in a washing machine A can be lowered caudad, and can be arranged, and the vertical space e of the lower part of the wash tub d can be used as the minimum thing so that drawing 4 may see.

[0019] The hose H of the 2nd example shown in drawing 5 and drawing 6 is a hose of inside-and-outside one type which formed the portion used from the opening c for hose insertion formed in the portion which attaches in the interior of a washing machine A, and is arranged, and the side attachment wall b of a washing machine A, making project outside in one hose which followed series one, as shown in drawing 6 .

[0020] Namely, the carrier canteen-like section 1 is formed in the end side for connecting the hose H of this example to the drainage cylinder a in a washing machine A. The bellows-like irregularity wave-like bending formation section 2 in which the annular section 21 of a major diameter and the annular section 22 of a minor diameter are arranged by turns like the 1st example of the above by the portion following this is formed. The long middle tubed part 3 which consists of a portion which pipes the interior of the washing machine A following this, and a portion made to project outside through the opening c of a side attachment wall b is formed in the shape of [annular] a concavo-convex wave. The tubed part 7 fixed to the opening c of a side attachment wall b is formed in the interstitial segment, and the cylinder part 8 which carries out an attachment-and-detachment stop, and the tubed part 6 for drainage are formed in the hose stop section f fixed to the nose-of-cam side of an external lobe by the upper part of the side attachment wall b of a washing machine A. These whole is really [of the long picture currently formed in series one / inside-and-outside] type hose.

[0021] It **, and the both sides 23 and 24 of the direction of a tube axis of the aforementioned bending formation section 2 are held by the two annular sections 12 and 12 of the bending formation implement 10, and are crooked in the shape of L character, it sets to the minor diameter side of this flection, and they are the aforementioned major-diameter annular sections 21 and 21. -- The point that comrades bend at a right angle and are mutually formed mostly in the state of carrying out pressure-welding **** is the same as the 1st example of the above. In addition, generally you may use it, attaching the hose rack implement of well-known hook type in the cylinder part 8 for the aforementioned attachment-and-detachment stop by the side of the nose of cam of this hose H.

[0022] The example shown in drawing 7 shows the example of the hose structure which has carried out arrangement formation of the annular sections 21 and 21 of two minor diameters among the annular sections 21 and 21 of each major diameter which adjoins the structure of the bending formation section 2 concerned in the hose H shown in the 1st example of the above, and the 2nd example. The hose H said to this invention can be carried out in this way, and can also be carried out.

[0023] The example shown in drawing 8 or drawing 12 shows the gestalt of the bending formation section 2 about the example of the annular section 21 of an adjoining major diameter, the annular section 22 of the minor diameter of 21 -- which carries out arrangement formation in between, and the annular section 22 of 22 -- from which a part of pipe hoop direction serves as a minor diameter in the configuration as compared with the annular section 21 of a major diameter.

[0024] It **, and in the case of the 4th example which drawing 8 or drawing 10 showed, the cross-section configuration of the annular section 22 of this minor diameter is made into the structure which has carried out eccentricity to ** (it sets to drawing 10 and is a lower part) on the other hand as compared with the annular section 21 of a major diameter by the shape of a perfect circle so that drawing 10 may see. The example of drawing 11 is made into the structure made to have transformed only the Johan section so that it may become a minor diameter to the annular section 21 of a major diameter. Moreover, the example shown in drawing 12 is made into the structure made to have transformed two places of the upper part and the lower part so that it may become a minor diameter to the annular section 21 of a major diameter.

[0025] The purpose which this invention is not necessarily limited only to the thing of such example structures although the example considered for this invention to be typical above is explained, and is equipped with the aforementioned requirements for composition said to this invention, and is said to this invention is attained, and within limits which have the effect said to below, it can change suitably and can carry out.

[0026]

[Effect of the Invention] So that already clearly from the above explanation the hose of this invention The portion following the carrier canteen-like section for connecting with the drainage cylinder in the washing machine formed in the end side, even if it is in the hose for piping inside the plane and is in the hose of inside-and-outside one type It considers as the bending formation section which arranged by turns the annular section made into the different diameter like [as the annular section of a major diameter, and the annular section of a minor diameter], and was made into the bellows-like irregularity wave. Bend the both sides of this bending formation section, and you make it hold by the two annular sections of a formation implement, and make it crooked. Since the major-diameter annular sections bend at a right angle and they form in the state of carrying out pressure-welding ****, mostly mutually at the minor diameter side of this flexion It can pipe, where a hose did not carry out flattening by bending and the shape of a cylinder is maintained, even if rapid bending formation was possible and the vertical space of the wash tub lower part was small. Vertical space of the wash tub lower part is made small as much as possible, and it was able to come to arrange the pars basilaris ossis occipitalis of a wash tub in the low position.

[0027] Therefore, it is not necessary to lengthen the vertical length of a wash tub and to make the vertical height of the whole washing machine high also as a mass tub and, when it is an adult wash tub conventionally, the low washing machine of vertical height can be obtained, and the low people of height

were also able to come to expect the remarkable effect that the washing machine which wash tends to carry out can be obtained.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The hose of the 1st example is fracture front view a part.

[Drawing 2] The state of the hose of drawing 1 where it is not crooked is fracture front view a part.

[Drawing 3] Expansion front view of the bending formation section.

[Drawing 4] the wearing state to a washing machine is shown -- a part -- notch front view

[Drawing 5] Front view of drawing 1 of the 2nd example.

[Drawing 6] It is notch front view of drawing 4 [this example] a part.

[Drawing 7] Front view showing the important section of the 3rd example.

[Drawing 8] Front view of drawing 2 of the 4th example.

[Drawing 9] Expansion front view of drawing 3 of this example.

[Drawing 10] The A-A line cross section in drawing 9 .

[Drawing 11] The cross section of drawing 10 of another example.

[Drawing 12] Furthermore, the cross section of drawing 10 of another example.

[Description of Notations]

1 Carrier Canteen-like Section

2 Bending Formation Section

3 Middle Tubed Part

4 Tubed Part for Connection

5 External Hose

6 Tubed Part for Drainage

10 Bending Formation Implement

11 Base

12 Annular Section

21 Major-Diameter Annular Section

22 Minor Diameter Annular Section

23 One Flank
24 Flank of Another Side
A Washing machine
The drainage cylinder of a washing machine



[Translation done.]

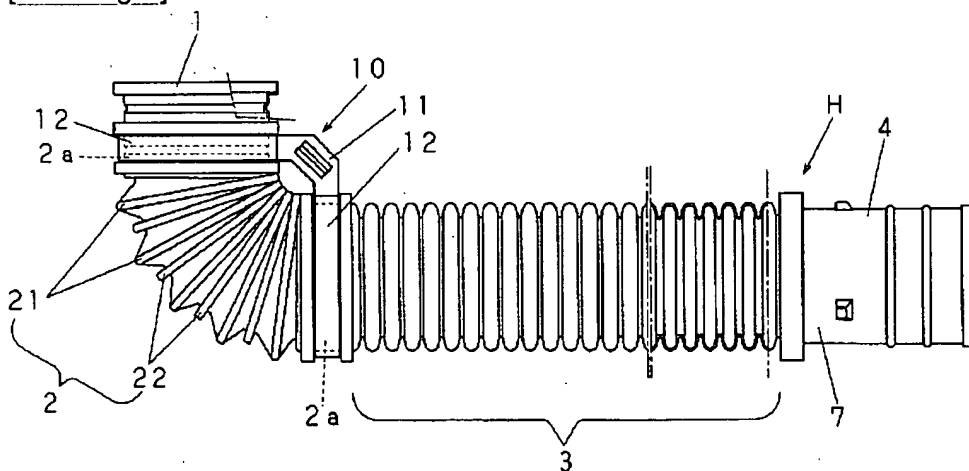
* NOTICES *

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1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

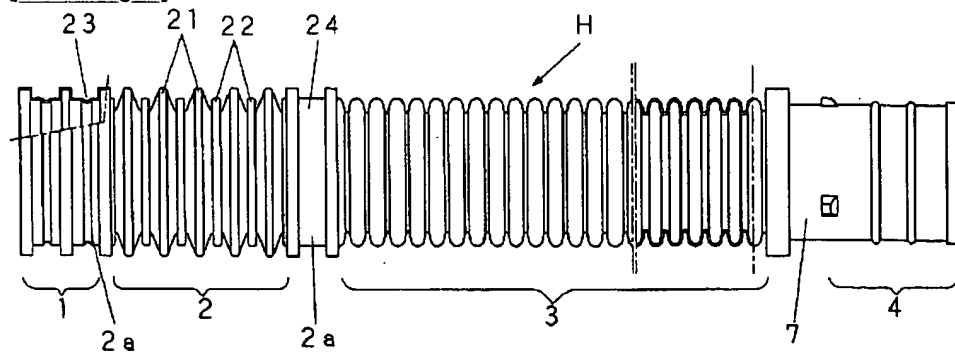
DRAWINGS

[Drawing 1]

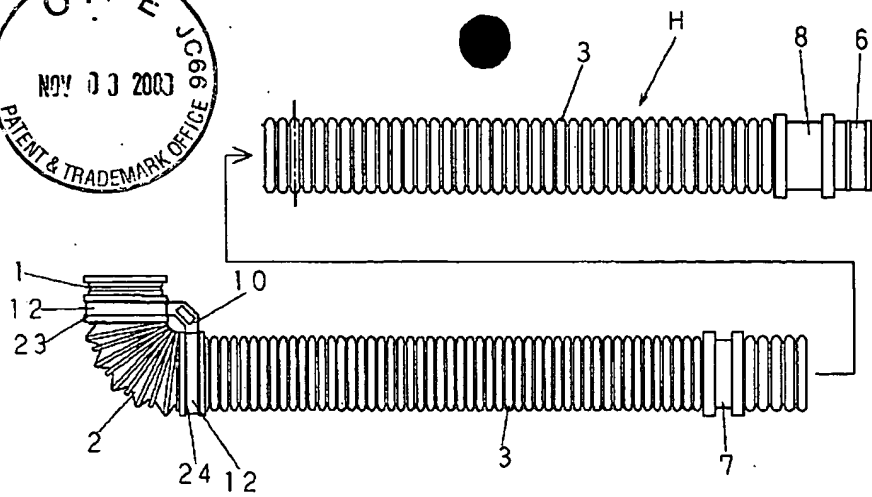


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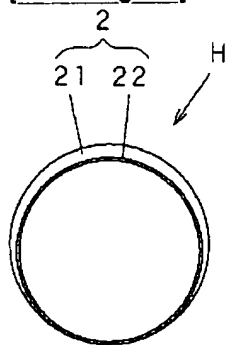
[Drawing 2]



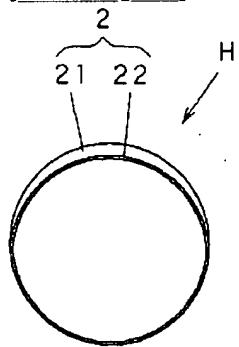
[Drawing 5]



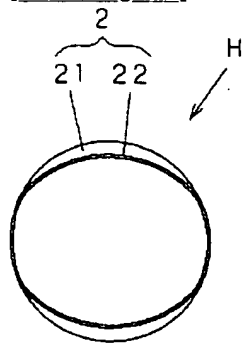
[Drawing 10]



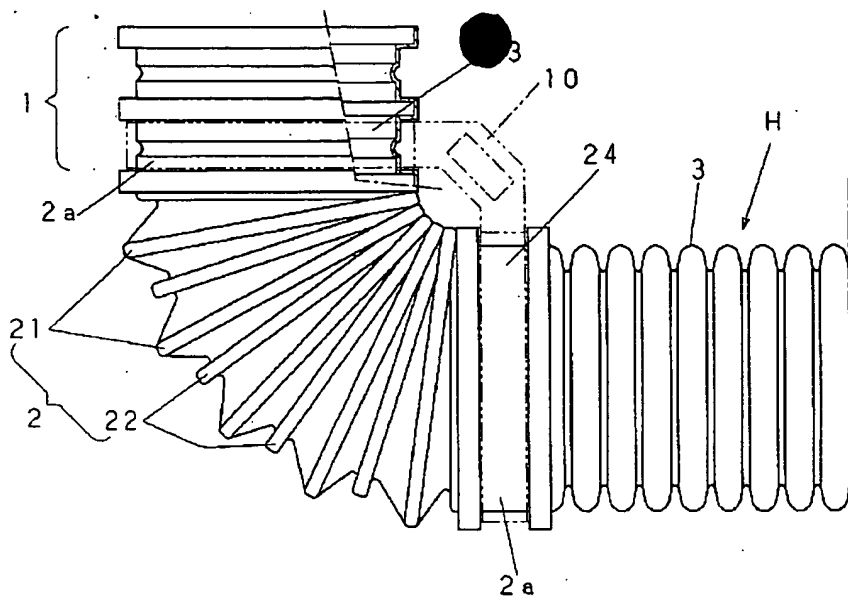
[Drawing 11]



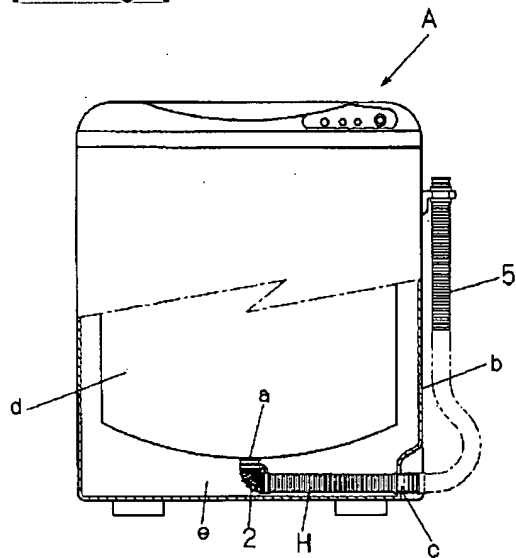
[Drawing 12]



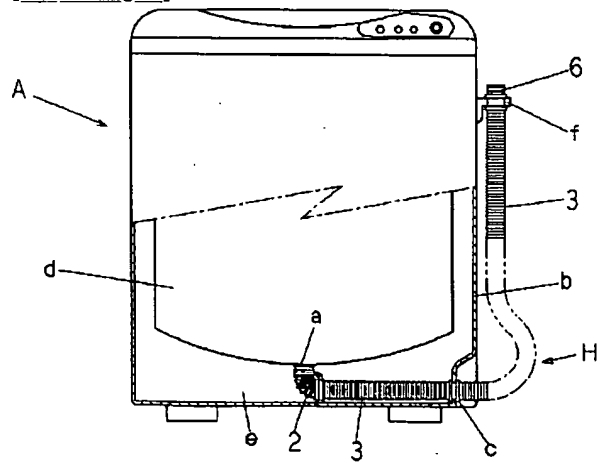
[Drawing 3]



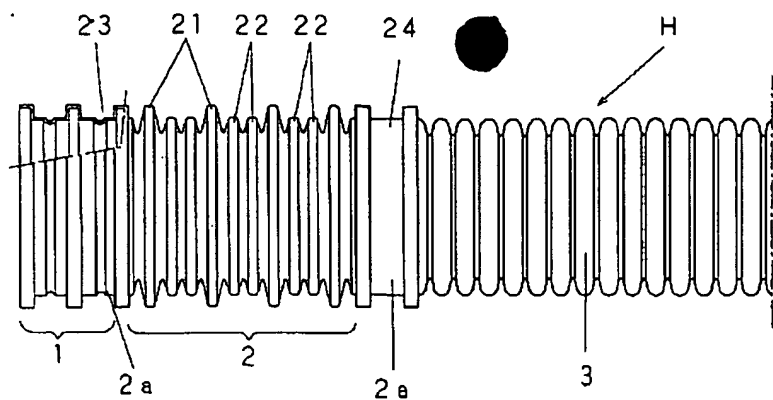
[Drawing 4]



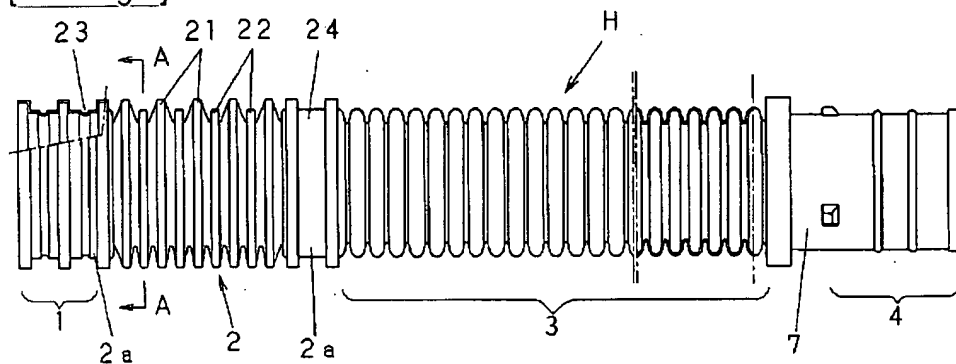
[Drawing 6]



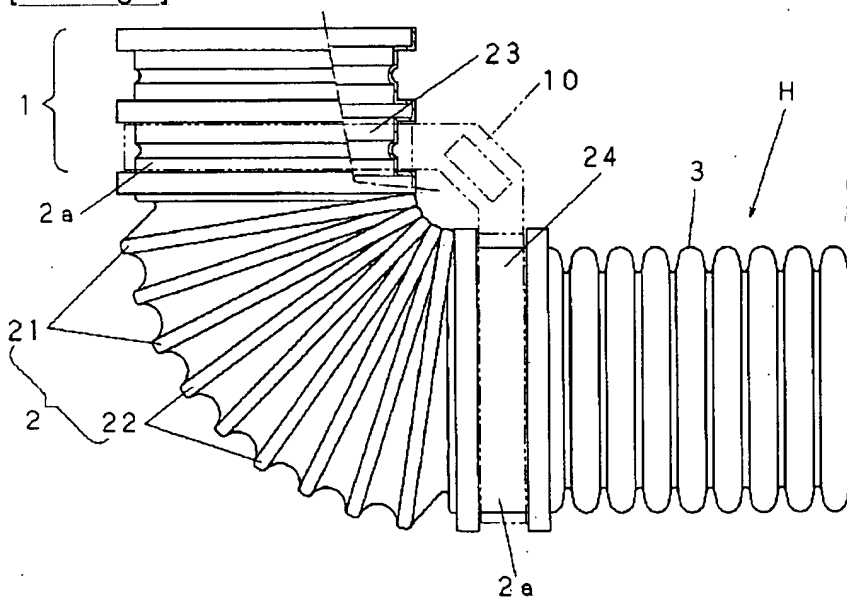
[Drawing 7]



[Drawing 8]



[Drawing 9]



[Translation done.]